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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,821	03/13/2004	Sally Judith Weine Ramsey		8386

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EXAMINER

BERMAN, SUSAN W

ART UNIT PAPER NUMBER

1711

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/799,821	Applicant(s) WEINE RAMSEY, SALLY JUDITH	
	Examiner Susan W. Berman	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/04</u> . | 6) <input type="checkbox"/> Other: ____ |

Specification

Claims 1 and 1-5 are objected to because of the following informalities: The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 1 and 1-5 been renumbered 1-6. This application was filed with two claims numbered claim 1. Therefore, the claims have been renumbered from 1 to 6. It is not clear which claim 1 original claims 2-5 were intended to depend from. Claims 2-5, now claims 3-6, have been treated as being dependent from either claim 1 or claim 2 (filed as claim 1).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what is meant by the phrase "curable materials incorporating nanotechnology". The use of the abbreviation "UV" renders the claim indefinite. There is no antecedent basis in claim 1 for the acrylate monomers recited in claim 3, the photoinitiator recited in claim 4 or for the aliphatic urethane recited in claim 6.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. The kinds of "UV curable materials" are not specified. The phrase "incorporating nanotechnology" fails to set

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forth any specific kind of nanotechnology or method for “incorporating” nanotechnology. The recitation “nanotechnology” includes an entire broad field of technology.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Das et al (4,522,958). Das et al disclose UV curable compositions comprising microparticles ranging in size from 1 to about 150 nanometers for coating substrates such as fiberglass. See the Abstract, column 2, lines 55-58, column 7 and column 11, lines 15-26, and lines 48-55.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Das et al (4,526,910). Das et al disclose UV curable compositions comprising microparticles ranging in size from 1 to about 150 nanometers for coating substrates such as fiberglass. See the Abstract, column 2, lines 44-47, column 7, column 10, lines 42-53, column 13, lines 42-53, and column 11, lines 7-14.

Claims 1, 2, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Das et al (4,652,470). Das et al disclose UV curable compositions comprising microparticles ranging in size from 1 to about 150 nanometers for coating substrates such as fiberglass. See the Abstract, column 2, lines 64-67, column 8 and column 15, lines 9-17.

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Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by MacQueen et al (6,399,670). MacQueen et al teach compositions comprising texture-producing particles having sizes from 1 to 100 nm. Compositions comprising urethane acrylates and alkoxyated acrylate monomers are taught in columns 8-9. See Tables 1 and 9.

Claims 1, 3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by trade literature for "NANOCRYL –Nanosilica Reinforced (Meth)-Acrylates". The trade literature discloses compositions comprising NANOCRYL products, acrylate monomers and aliphatic urethane acrylates for radiation curing.

Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Wu et al (6,467,897). Wu et al disclose compositions containing nanometer sized inorganic oxide particles in amounts from 15-40 wt. % (columns 7-10). Acrylate monomers are taught in column 17 and urethane (meth)acrylates are taught in column 21, line 45, to column 22, line 4. Photoinitiators are taught in column 24, lines 34-54, and in column 29, lines 49-54. See the Examples.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacQueen et al. MacQueen et al disclose compositions, as discussed above, comprising photoinitiators and teach that

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preferred free radical photoinitiators are acyl phosphine oxides and benzophenone derivatives (column 6, lines 6-22). It would have been obvious to one skilled in the art at the time of the invention to employ 1-hydroxyxylhexyl phenyl ketone or 2-hydroxy-2-methyl-1-phenyl-propanone as photoinitiators in the compositions disclosed by MacQueen et al because these photoinitiators are known benzophenone derivatives. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing compositions curable by ultraviolet energy in the presence of the specified photoinitiators.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rohrbaugh et al [US 2002/0028288] discloses coating compositions comprising a nanoparticle system, but do not mention ultraviolet radiation curable compositions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman
Primary Examiner
Art Unit 1711

SB
6/27/05